CALIFORNIA DEPARTMENT OF TRANSPORTATION

Journal

October–December 2000 Volume 1 · Issue 2

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A Letter to Readers

I am extremely grateful to the dedicated men and women of our agency for their professional contribution to the safety of California's motorists. The departments within the Business, Transportation and Housing Agency comprise the Governor's principal transportation regulatory and enforcement organizations. By combining their resources, we are making driving safer, as evidenced by the fact that the number of fatalities per miles traveled is now the lowest in the state's history.

As Secretary for Transportation, I am committed to having the best traffic safety programs possible, including anti-DUI, bicycle and pedestrian safety, occupant protection, police traffic services, roadway safety and emergency medical services. These programs and so many others are helping California achieve its traffic safety successes, such as having the highest seat belt compliance rate in the nation.

Maria Contreras-Sweet

I have a charge from Governor Gray Davis to improve safety on California's roadways. That means relieving traffic congestion, thus affording people more quality time for work and family life. We all enjoy getting home quickly and safely after a hard day's work.

One of our shared goals is to alleviate traffic congestion by stopping unsafe driving behaviors that contribute to accidents. Through funding for more law enforcement personnel and equipment, emergency response vehicles and public education, we will make our roads even safer. We are also excited about the new partnerships being established with community-based organizations in California. This innovation will expand our outreach enormously. The Governor recently awarded $11.8 million to local community-based organizations to promote traffic safety programs.

Traffic safety is everyone's business. Governor Davis and I look forward to working with all of you to improve the quality of life for all Californians.

Maria Contreras-Sweet

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Journal

Soil Nail

By Ken Jackura · Office of Roadway Geotechnical Engineering
Photos by Bill Hall

The California Department of Transportation has been actively implementing Soil Nailing technology for excavated slopes since the late 1980s. This technology surfaced in France in the early 1970s as a spinoff from European tunneling excavations where grouted steel rods were used to knit and support potentially loose rock slabs. French engineers were quick to notice the advantages of extending this tunneling practice to support excavated, near-vertical soil slopes, because of dramatically reduced costs over traditional methods of slope stabilization. During this time, the French engineers coined the construction term "soil nailing," referring to the percussion method of installing the bars in early slope stabilization schemes.

Technology

Soil Nailing is a "top-down" construction process that consists of a soil slope excavated to a vertical, or near-vertical orientation in 2-2.5 m high (6-8 ft.) lifts, internally supported by closely spaced steel reinforcing bars fully grouted in place. The bars are placed in an inclined downward drill hole and gravity filled with high slump grout for developing anchorage to the surrounding soil. The bars are spaced at center to center distances of 1.2 to 2.5 m (4-8 ft.), with the tighter spacing with weaker soils. Potential soil movements are immediately resisted by stress increases in the bars; thus, no bar pre-stressing is required as in tieback wall systems. The exposed soil face is covered with a 100-150 mm (4-6 in.) shotcrete layer reinforced with steel rods and/or wire mesh for additional support.

The National Cooperative Highway Research Program on soil nailing contained the following summary of the benefits of this concept in a 1987 research report:

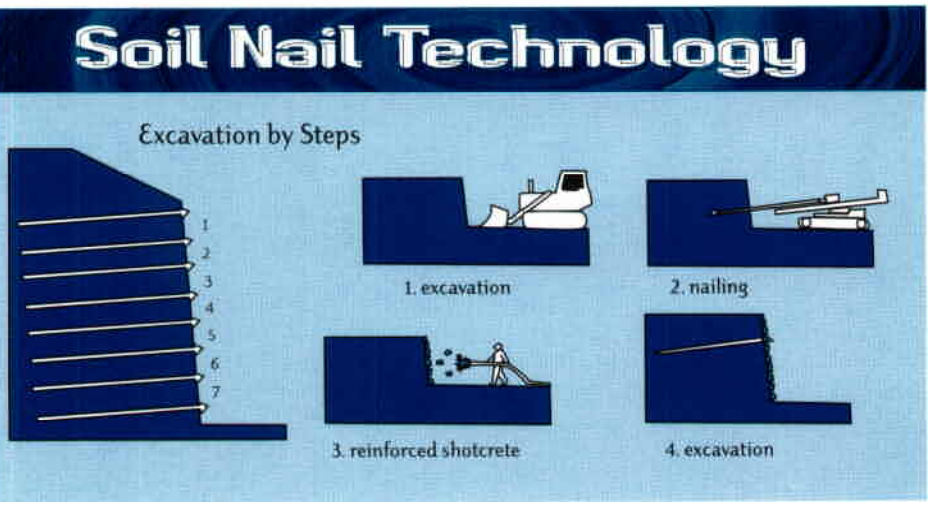
Low cost: In soil nailing, the in-situ ground is used as one of the main structural elements in the retaining structure, the other structural element being the relatively low-cost nails. The shotcrete or prefabricated facing has only a local role, preventing the collapse of the soil at the face between the nails. The facing is therefore relatively thin and inexpensive. The low cost of the elements can provide significant savings in construction materials compared to conventional solutions, which generally require thick reinforced concrete facings or prestressed ground anchors.

Light construction equipment: Soil nailing uses simple drilling and grouting equipment (drilling by vibropercussion and grouting generally by gravity). The handling of equipment is relatively easy because of staged construction, making the technique particularly useful in sites with difficult access.

Adaptability to site conditions: Application of the system is flexible because the staged construction process allows the geometry of the structure, the inclination of the facing, and the density and dimensions of the reinforcements to be adapted to the site conditions and soil characteristics exposed at different levels during excavation.

Easy operation in heterogeneous soils: In heterogeneous ground, where boulders or hard rocks may be encountered in softer layers, soil nailing is generally more feasible than other techniques such as slurry walls and soldier piles, because it involves only small-diameter drilling for the installation of the inclusions.

Flexibility: Nailed soil retaining structures are more flexible than classical cast-in-place reinforced concrete retaining structures. Consequently, these structures can conform to deformation of surrounding ground and withstand larger total and differential settlements. This characteristic of soil nailing can provide economical support for excavation on unstable slopes.



The first known implementation of a soil nail wall in the United States was the privately contracted Good Samaritan Hospital in 1976 in Portland, Oregon. Caltrans became one of the first departments of transportation to implement the concept with the design and construction of a small 3 m (10 ft.) high soil nail wall on State Route 163 in San Diego, in 1987.

The analysis process for this 'first start' soil nailing project required a considerable literature review by geotechnical engineers at the Transportation Laboratory into how the evaluation should be conducted. Also, research was conducted into the stresses likely to be encountered in the steel shotcrete face reinforcement, based on a theoretical estimate of lateral soil pressures at the soil-shotcrete interface, as well as at the nail head connection detail. Initially, hand calculation methods were established for defining the stress state of the reinforcing elements and overall factor of safety for the completed, excavated and nailed slope. Since these calculations were quite laborious, the Office of Roadway Geotechnical developed the computer program SNAIL to evaluate bar stresses and stability factors. The program reduced computational time from days to minutes and was the most significant factor in promoting soil nailing within the department.

Soon after the San Diego wall was constructed, other walls were placed on the design board by consultants in various California cities and counties who were working on locally funded projects. Since Caltrans was acknowledged as the authority for the design standard, many of consultants asked for the program to help them in soil nail design efforts. Eventually the program was distributed worldwide and is currently on the Internet.

The greatest benefit of this construction method is its reduced costs over other traditional methods of stabilizing and supporting cut slopes. Normally concrete cantilever walls, or gravity walls of the engineer's choice, were constructed but were generally more costly since over-excavation was necessary to provide sufficient base width for the wall system. This over-excavation was even more costly when high slopes where encountered, or if buildings or pipelines above or behind the proposed wall existed. As an example, a typical soil nail wall on the order of 5 to 7 m (17-23 ft.) high can be constructed for approximately $375 per m² of face ($35 per square foot) at 1999-00 costs, whereas a traditional wall type, such as a concrete cantilever wall, would typically run about $590 per m² of face ($55 per square foot).

Soil nailed walls as high as 16.8 m (55 ft.) have been designed by Caltrans engineers, two of the more notable

That Caltrans leads in this technology is attested to by requests for information on program use and design specifications from engineers from other state departments of transportation.

being in Santa Clara and Sonoma counties for landslide control and designed by Hooshmand Nikoui of the Office of Roadway Geotechnical Engineering. Currently, another notable wall is being designed for the San Francisco Bay Area that will be 24 m (80 ft.) tall. This wall, at the new Carquinez Bridge, will be temporary and restrain the cut slope for construction of the north anchorage. Soil nail wall designs in Caltrans are typically provided by the Office of Roadway Geotechnical Engineering with the Division of Structure Design developing a thicker structural PCC overlay when the wall is designed as a permanent structure.

Face treatments can be embellished to enhance the wall's appearance. Wall aesthetics are quite important as Caltrans moves to satisfy nearby residents and motorists in an era of commitment to environmental sensitivity. Wall cost for such architectural treatments are nominal, generally less than $21 per m^2 of wall face ($2 per square foot). Almost any color and face sculpture can be provided.

The accompanying photo illustrates a recently completed wall on State Route 92 in San Mateo County. Wall height is over 15 m (50 ft.) and constructed at a cost of approximately $800 per m^2 of wall face ($75 per square foot). The walls were constructed for roadway widening in steep terrain and in a complex geologic setting that required specialized and expensive drilling techniques. However, wall costs were still significantly less than for the wall type that would have been proposed as a traditional alternate, a soldier-pile tieback wall at $1200 per m^2 of wall face ($110 per square foot).

Over the past 13 years, more than 185,800 m^2 (2 million square feet) of soil nailed walls have been constructed in California alone, with Caltrans projects directly (or indirectly, because of consultant-designed projects under locally funded measures) accounting for the vast majority. Savings are conservatively estimated at a minimum of $160 per m^2 ($15 per square foot) of wall face for total cost savings of at least $30 million.

That Caltrans leads in this technology is attested to by requests for information on program use and design specifications from engineers from other state departments of transportation. FHWA also has promoted this design concept by providing a manual of testing and design procedures developed through contract with Golder and Associates of Redmond, Washington. The manual ("Manual for Design & Construction Monitoring of Soil Nail Walls") goes into depth on theory, case studies, research, and design recommendations, and is quite useful to the practicing geotechnical engineer already knowledgeable in the rudiments of soil nailing.

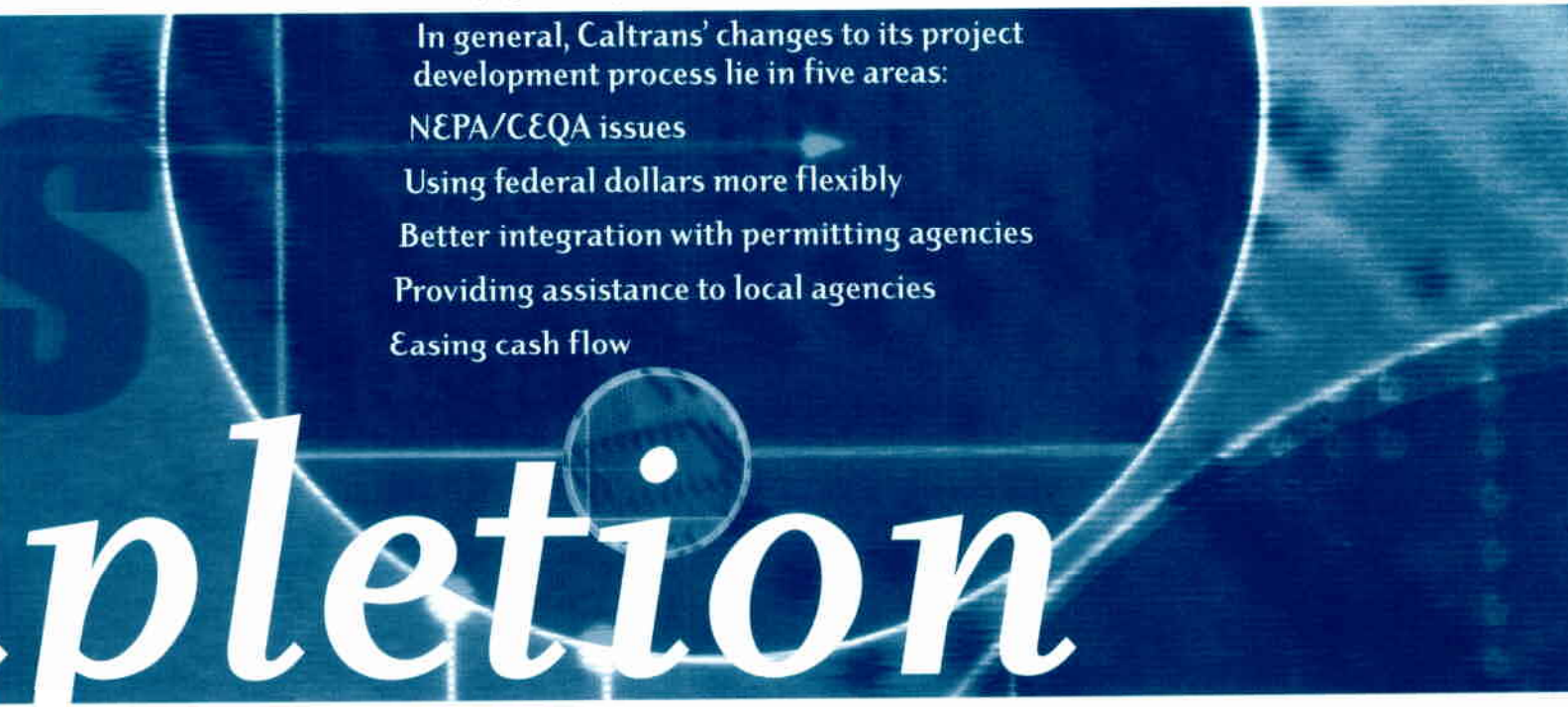
The soil nail wall as a primary 'top down' steel reinforced gravity structure is here to stay. It is beyond its infancy in production in California and is gaining wide acceptance with other departments of transportation. Use of the technology will likely increase substantially in California over the next decade as the population increases and the governor's commitment to increasing public transportation mobility is implemented. Because value is a key to this commitment, new engineering methods such as soil nail technology will go far in meeting this objective.

Speeding Project to Com

Concerned with a fat cash balance in the State Highway Account and lagging delivery of locally funded transportation projects, Caltrans has been in the midst of a multi-year effort to make funding and project development processes more flexible and accessible to those using them.

The changes, which are estimated by some local officials to have the potential of reducing project development costs by as much as 20 percent, have been aided by two pieces of legislation by Assemblyman Thomas Torlakson, AB 1012 and AB 2928.

The outcome of these efforts, which involved a partnership with federal, State and other local agencies, has been additional flexibility and cooperation between the agencies, resulting in a substantial improvement in delivery of local agency projects. In 1999-2000, the local agencies delivered 140 percent of the projects that were originally planned, reducing congestion and cutting into backlogs of aging and damaged facilities. Other measures that pertain strictly to State projects have promise of producing positive results.



Among the measures adopted were several that flowed from Assemblyman Torlakson's follow-up legislation, AB 2928. For instance, local agencies may substitute State-only funds for federal funds, reducing the number of agencies involved in reviews of the projects and allowing the local agencies to comply with State environmental processes, rather than the more cumbersome federal ones. (Local agencies must still comply with applicable laws regarding endangered species and cultural resources.)

The State also put more resources to work in helping local agencies develop their projects. Local agencies, especially the smaller ones, are not regularly called upon to process projects that must comply with federal regulations. The result is that each such project results in a kind of reinvention of the wheel; with State experts assisting them, the agencies are able to move more quickly and with greater efficiency.

AB 2928 also addressed a problem that had developed in the State Transportation Improvement Program, one that affected both State projects and locally financed ones: the program covered only four years. Because of the complexity of environmental and other regulations, four years simply was not enough time in which to develop a project from concept to start of construction. As a result, projects that were in the normal project development pipeline looked as if they were being delayed.

Assemblyman Torlakson's legislation added a year to the program, but also allowed both the State and local agencies to finance two additional years of advanced development work – planning, preliminary engineering and environmental analysis before tying up funds for capital outlay.

With regard to its own projects, Caltrans began to rethink the steps in its project development process. It had been generally unable to get agreement from the permitting agencies – Fish and Wildlife, Environmental Protection Agency, U. S. Army Corps of Engineers and others – early in a project's developmental life-cycle. This often meant disagreements on environmental matters after the scope of a project had been set. At worst, this meant going back to the drawing table and re-designing the project. At best, it often meant many months of haggling over project features and environmental mitigation.

Caltrans also found that it occasionally fixing the scope of the project before all adequate information was available. This resulted in changing the scope, schedule or cost of the project after it had gotten into the State Transportation Improvement Program or the State Highway Operations and Protection Program. Such changes amounted to broken promises.

To combat this the department initiated a "change control" effort which consisted of doing surveys, mapping, bridge site investigations and environmental analysis prior to the Project Initiation Document. The department also began doing field investigations with the permitting agencies in the Project Initiation phase, thus getting a much better picture of what those agencies would need for resource avoidance or mitigation.

One problem was that the permitting agencies often did not have enough staff to become engaged in the projects at this early stage. And they often did not have enough staff to do a timely and thorough analysis of the department's proposals when Caltrans came to them for needed permits. To solve this problem, Caltrans requested and received an additional 20.5 personnel years in its budget in order to place environmental staff in those agencies to work exclusively on transportation projects. This is expected to provide timely decision-making and to reduce the amount of bureaucratic warfare that had formerly plagued project development.

The teams engendered by Assemblyman Torlakson's legislation made almost 200 suggestions overall. Because the teams worked independently from four separate geographic locations, many of the recommendations were overlapping. But the recommendations covered all areas of project development – from programming issues through construction. Caltrans is continuing to evaluate these recommendations and to adopt those that appear to have utility in the project development process.

The department also began doing field investigations with the permitting agencies in the ***Project Initiation phase,*** *thus getting a much better picture of what those agencies would need for resource avoidance or mitigation.*

AB 1012 *called for:*

1. Creation of advisory teams to look at ways to speed project delivery.
2. A comprehensive project management information system.
3. Providing longer lead-times and early funding of project activities for more complex projects.
4. Allowing Caltrans to do work on a reimbursement basis for local agencies.
5. A loan program to allow local agencies to use State funds on local projects.
6. New project development Study Report Guidelines.
7. A "Use it or lose it" provision, requiring local agencies to make unused funds available to other agencies.

Response to AB 1012

1. Caltrans is studying 191 recommendations for speeding project delivery made by the advisory teams.
2. The California Business, Transportation and Housing Agency is spearheading a proposal for the management information system.
3. Longer lead-times and early funding have been put into effect.
4. Caltrans is providing reimbursed assistance to local agencies when asked.
5. The loan program is in place.
6. Guidelines for Project Study Reports have been released.
7. Local agencies have responded vigorously to put their funds to work so as not to lose them.

Whither metric

10

The metric winds, it seems, blow hot and cold. Every few years, enthusiasm rises for the system of weights and measures that has been embraced by every nation in the world except the United States and Myanmar, formerly Burma. But just as the night follows the day, an equal and opposite disenchantment arises to turn back the tide of joules, ergs and hectares.

But Caltrans remains officially metric, even though enactment of the Transportation Equity Act for the 21st Century, signed by President Clinton in 1998, removed the federal mandate for full conversion. When TEA-21 gave the option to each state to remain English, California – along with the majority of other state departments of transportation – decided to stay metric. Since then, numbers of states have reverted to English units, and a recent survey found 14 states committed to metric, 30 to English, and six using dual English and metric units.

America's metric movement goes back to the Metric Conversion Act of 1975, which declared a national policy of encouraging the increased use of the metric system. This effort was to be voluntary and, it was hoped, would be led by industry, which was finding itself increasingly isolated in an ocean of metric products. Although steam grew for conversion, support for it was not widespread. Then, in 1988, Congress passed the Omnibus Trade and Competitiveness Act, amending the 1975 act to declare that the metric system was the preferred system of weights and measures for U.S. trade and commerce.

That act required each federal agency to adopt the metric system in its procurement, grants, and other business-related activities. The Federal Highway Administration developed a five-year Metric Conversion Plan, approved by the Secretary of Transportation in 1991, requiring the states to be metric by October 1996.

Then, however, the National Highway System Designation Act of 1995 pushed the conversion date to October 2000. TEA 21 removed it altogether.

FHWA has indicated that it will remain metric in its internal operations. The agency uses dual units with the metric value first, followed by the inch-pound value in parentheses, for correspondence or publications intended for broad audiences. These include publications such as right-of-way or environmental clearance documents and general information. Research reports prepared under FHWA planning and research grants must contain metric units. All other FHWA documents should include metric units.

Caltrans notified local agencies in August of 1998 that they could use either English or metric units on projects off the State highway system, but they must use metric units on projects for any projects on the system. The department amended that policy in October 1999, allowing dual units for encroachment permit projects (those with a cost of up to $1 million within the State right-of-way).

With declining availability of 1992 English Standard Specifications and the latest English Standard Plans becoming obsolete, local agencies and other customers who wish to use Caltrans highway contract documents will have either to switch to metric or use the Standard Specifications for Public Works Construction (the Green Book), depending on the project. The 1997 version of the Green Book, published by AASHTO, is available in dual units and may be used for encroachment permit projects.

The change to metric units did not come without concern from our external partners. Many local agencies have routinely used Caltrans' contract specifications for years.

To assist, Caltrans makes a tailored set of boilerplate contract documents for Federal-aid projects available to local agencies on the Internet. The department is also considering creation of a set of soft converted standard specifications, special provisions, and standard plans from metric to English units for local agency use off the State highway system. If the department takes this step, it will absorb the administrative cost as a gesture of partnership with local agencies.

Exceptions to the metric policy are still handled on a case-by-case basis. Projects granted exception to the metric policy must follow the April 15, 1998 memorandum on processing metric exceptions, and reiterated by a second memorandum on April 21, 2000 that listed projects that were to be exceptions. As Caltrans advertises fewer and fewer projects with approved metric exceptions – those listed in the April 21, 2000 memorandum – it moves closer to a time when all projects will be metric.

At Caltrans, we will use metric values when doing our work, although for external purposes, the department will continue to publish documents with metric values followed by English equivalents for the foreseeable future.

By Jeff Morales

Director, California Department of Transportation

Sudu Chalan — Keeping Indian Culture Alive in the U.S.

Sudu Chalan, when he is not busy streamlining the project data of various District 12 programs into one database to be accessible through inter/intra net, occupies himself with being one of the world's top performers on the harmonium, tabla, ghatum, mridangam and veena.

Born to a family of musicians in Bangalore, India, Sudu sings and performs on the above instruments in two styles of Indian music, Carnatic and Hindustani. He has produced many two-hour musical ensembles for 15 musicians in India and the USA, and led 65 adults and 30 children in a one-hour musical dance/drama/float presentation, "Karnataka Andhu-Indhu," for the Karnataka Cultural Association of Southern California in 1997.

Sudu Chalan

Off the job, Sudu produced a two-week-long Indian Subcontinent cultural program in the Westwood Basic Plus School in 1999 that included presentations, science exhibits, computer demonstrations, dresses, jewelry, music, dance and sports.

The on-the-job Sudu is an 11-year Caltrans employee and Range D Transportation Engineer with a Masters in Civil Engineering (Structures) from the University of California, Irvine. He is an examiner and judge for California Awards for Performance Excellence and California Team Excellence Awards.

Off the job, Sudu produced a two-week-long Indian Subcontinent cultural program in the Westwood Basic Plus School in 1999 that included presentations, science exhibits, computer demonstrations, dresses, jewelry, music, dance and sports. His production also included two live presentations of music and dance by professionals and students of the school. After all that, there was Indian food.

Sudu sang solo for Rangoli fine arts at the 40th Annual Los Angeles County Holiday Celebration on December 24th, 1999, at the Dorothy Chandler Pavilion at the Los Angeles Music Center, broadcast live nationwide. He has performed solo, conducted groups and worked with an array of artists from India and the U.S.

Presently, in his spare time, Sudu, who plays several Western instruments as well, operates a music school with 25 students who range in age from 5 to 50 years of age. The classes are designed on a curriculum with annual examinations, Vijayadashami recitals and lectures, demonstrations and workshops.

Photos by Don Tatsuki

...It was all part of the kickoff of the 2000 United California State Employees Campaign on September 13, 2000, in Capitol Park.

Caltrans Plays and Sings for United Way

Jande, Dayna Jones, Al Zaid, Frankie Santana, Diana Coleman and Sonia Starks sang solos. Linda, Jerome, and the Caltranets sang together. Vickie Janek and Carlos danced to country music; Mary Ann Lorson and Paul Zimney danced the tango. Frankie Santana told jokes.

It was all part of the kickoff of the 2000 United California State Employees Campaign on September 13, 2000, in Capitol Park.

Cisco Santana-Montez, emcee, kept things going after Linda Buckhammer,

Departmental Campaign Coordinator, kicked off the talent show. Buckhammer introduced Tony Harris, Chief Deputy Director, who shared his own personal experiences with the United Way with attendees; Sherry Hammonds, the Capitol Region UCSEC Director, who also shared personal United Way experiences; and Alice Flissinger, Caltrans' UCSEC Loaned Executive.

All in all, it was quite a success! If you are interested in becoming a UCSEC Steering Committee member and working on activities like those above, contact Linda Buckhammer. As the slogan goes for this year's campaign... "Change the World. Start Here!"

It Takes a Village

Mentor, teacher, counselor, plain all-around-good-guy and, oh yes, representative of District 5 at all kinds of area open houses: that's mechanic Tony Martinez, whose community volunteer work has earned him a good-sized stack of thank-you letters from community leaders and teenagers around San Luis Obispo.

Martinez, who speaks movingly about his youth of picking oranges for peanuts in East Los Angeles, has a knack for connecting with youth, troubled or otherwise. Martinez began representing Caltrans at Career Days at nearby high schools and was so effective that the schools began asking him to speak at school assemblies.

"Not very often does a person come along who is so exceptional that it causes one to stop and take stock of one's own values and ideals. We are fortunate to have such a person among us."

Tony Martinez

Here's what his boss, Dave Higdon, says: "Tony has the exceptional ability to touch at-risk students. Over the past years, Tony has spent time at the Juvenile Court and Community Schools and the Grizzly Challenge program, reaching out to kids in trouble. He shares his own life experiences and stresses the value of staying in school, staying off drugs and out of gangs. Several times, Tony has arranged for kids to come in and see the working of a Caltrans shop firsthand. Kids have stopped by to share their successes with Tony and to thank him for the things he said that helped them on their way.

"Not very often does a person come along who is so exceptional that it causes one to stop and take stock of one's own values and ideals. We are fortunate to have such a person among us."

Snowboarding the Net

Next time someone gives you a hard time about working for a big, heartless State agency, tell them about this:

One Sunday afternoon last winter, John Beischel, a Range D Land Surveyor in Bishop, was headed south toward Ridgecrest on State Route 395. About 90 miles south of Bishop, he flew past a snowboard on the right shoulder of the highway. Beischel made a hurried but safe stop, jumped out and retrieved the snowboard, and put it in the back of his truck.

At Coso Junction just a few miles further on, Beischel took a close look at the snowboard, which was undamaged. He noticed that just behind the rear boot binding was a name scratched in the finish of the board: Yrbacht (name changed). Beischel thought it would be nice if he could find the snowboard's owner and return it. The light came on. He decided to go online and use "Switchboard.com" (an online nationwide telephone directory) to see how many Yrbachts were in California. There were 70.

Beischel printed the list, then crossed off all Yrbachts in central and northern California on a hunch that the board belonged to someone south of him. There were still 40 Yrbachts.

Armed with a list of phone numbers, Beischel began calling each, identifying himself and asking if they or anyone in their family were a skier or snowboarder. If he got a yes answer, he asked if they had recently lost any equipment. This went on for some time with no luck. Often he left a message and phone number on an answering machine. Finally, it got so late he stopped calling for the night.

The next day Beischel's wife called him at work. She had just gotten off the phone with a very happy young man who had described the board down to a gnat's eyebrow. Beischel called the boarder back and arranged for return of the property. A brother would be passing through Bishop in the near future and would stop by to pick it up. "Mr. Yrbacht was lucky his last name wasn't Smith or Jones," says Beischel.

John Beischel proved that the Internet was a useful tool for helping out a citizen. He also proved, once again, that the word "Caltrans" stands for heart as well as excellence.

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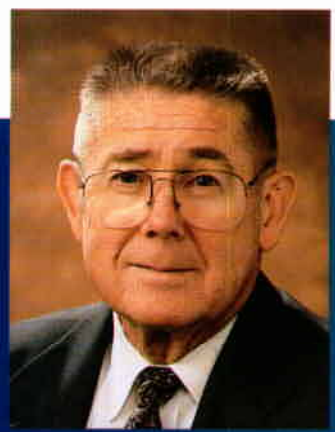


Jim Roberts

Chief Deputy Jim Roberts has a wall full of awards for his engineering leadership and is in danger of having to obtain a new wall.

Roberts Cited for Service

Chief Deputy Jim Roberts has a wall full of awards for his engineering leadership and is in danger of having to obtain a new wall for the awards that continue coming his way. Among them:

The American Society of Civil Engineers recently named Roberts the recipient of the 2000 Charles Martin Duke Lifeline Earthquake Engineering Award, "for his technical and public policy-making leadership in the seismic strengthening of bridges and pioneering efforts in earthquake resistant design and retrofit of highway transportation systems."

And the San Francisco Bay Area's Metropolitan Transportation Commission has just selected Roberts to receive the Greta Ericson Distinguished Service Award for his "career of public service to his profession and the citizens of California."

The new Technology Program shows its gratitude and pride for a fistful of accomplishments.

New Tech Awards

So far in 2000, Caltrans has awarded almost $200,000 in Superior Accomplishment Awards to 592 recipients. The New Technology and Research Program held its awards ceremony on September 7, awarding a Silver Superior Accomplishment Award to Asfand Yar Siddiqui for developing a system to measure vertical clearances of structures from a vehicle traveling at freeway speeds, eliminating the need for costly and unsafe manual measurements.

Vicki Cobb, William Tournay and Elaine Houmani earned Team Silver Superior Accomplishment Awards for an array of advanced traveler information initiatives, including the Yosemite Area Traveler Information Project, San Francisco Bay Area's TravInfo, TransCal, serving the I- 80/ US-50 corridor from San Francisco to Reno and Lake Tahoe, and Orange County's TravelTip. These systems provide timely transit, traffic and other transportation information to users of the transportation system.

Others who earned Sustained Superior Accomplishment Awards were: Dawn Barnard-Dingman, for assisting development of a data-based Project Control System to store information concerning the status of over 150 research contracts; Mary Rodriguez, for exemplary support in personnel and resource management; and Mary Jaschke, for a variety of assignments.

Sustained Superior Accomplishment Awards also went to Joe Holland, who supervised a partnered ground-motion research program in Southern California, a partnered guardrail end-terminal project and a quick-change signpost system; and Cliff Roblee, a dedicated professional whose success in developing partnered research recently earned him a National Science Foundation trip to evaluate earthquakes in Turkey and Taiwan.

A Trip to the Top

It is the duty of every new director to make a trip up the cable to the top of the Bay Bridge, kind of like the new ranch owner having to rope that first steer. Pictured above, Caltrans Director Jeff Morales gets the bird's-eye view of San Francisco from the west tower of the department's big workhorse, the San Francisco-Oakland Bay Bridge. Pointing out the sights is District 4's Dennis Mulligan, currently managing the bridge's East Span Replacement project.

Safety Awards

Governor Gray Davis has given 13 Safety Awards to Caltrans for key life-saving actions.

Safety Awards

Caltrans picked up 13 Governor's Safety Awards in 2000 for individual and group actions or programs that have safeguarded the lives or health of Caltrans workers or California citizens.

The award program is an annual event designed to recognize outstanding performance of individual State employees and groups for improving job health and safety, responding to life-threatening situations and preventing and reducing occupational injuries and vehicle accidents.

Group awards were given to:

Idlewild Marker Removal System Team, District 1 -
James Jensen, Thomas Palazzi and David Swallow

Wing Plow Committee, District 2 -
Eddie Cahill, Michael Cox, Edward Giroux, Jeff Kiser, John Nelson, Gary Ragan, Micky Riley, Russell Schulz, Allen Thompson and Mark Zumkehr

Toll Collection Safety Team, District 4 -
Roger Bishop, Richard Schatzman, Bruce Yingling

Motorist Assistance, District 5 -
Robert Brown, Robert MacKenzie and Stacy Meacham

Street Smart For Kids, District 8 -
Jeanne Garcia, Dennis Green and Mario Maala

Motorist Assistance, District 10 -
Matthew Brewer, Jon Contreras and David Miller

Individual awards were given to:

John Falco, Equipment Service Center -
Aid to a school bus in danger of bursting into flames

David Matchke, District 3 -
A career of safety accomplishments

Joel Johnson, District 4 -
Training program on the Personnel Hoist

Nicholas Dumas, District 6 -
Community training program on the dangers of highway-rail intersections

John Ortiz, District 7 -
Community training programs on work zone safety

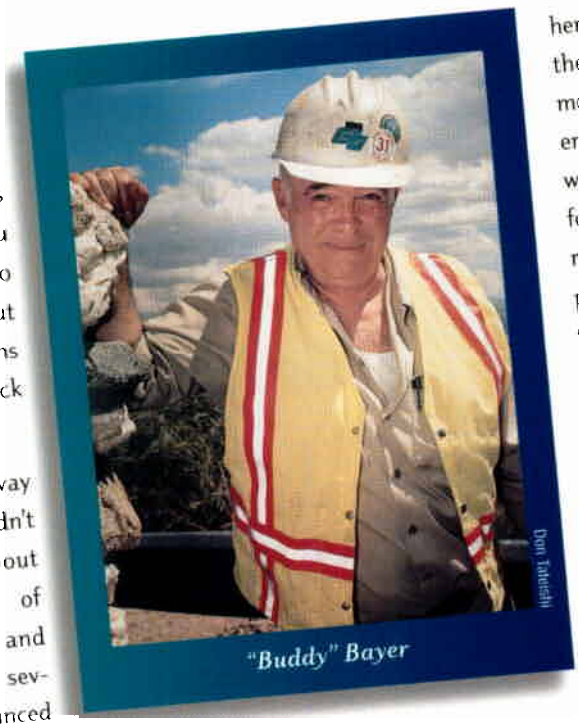
Robert Paris, District 9 -
Inspection program for propane storage safety

Daniel Juarez, District 11 -
Safety inspection checklist form

Editor's Notebook

As I was preparing the story about Route 395, Caltrans' newest Scenic Highway to be found elsewhere in the pages of this journal, I had the pleasure of meeting "Buddy" Bayer, a Caltrans Maintenance Supervisor in Lee Vining. Buddy will have retired, after a career spent working on his beloved Route 395, by the time this journal is printed. Not only did he work on the road as a Caltrans employee, before that, he was an employee of the construction firm that built 395's long climb up the Conway Grade.

Buddy showed me and Don Tateishi, the photographer, a healthy measure of hospitality and even gave us each a copy of a book about Mono County, written by his mother. Just about anything you wanted to know about Mono County, Buddy could tell you about it. And Buddy knew the locations of every pothole, slipout and crack in Route 395's pavement.



"Buddy" Bayer

As I drove down the highway to my next assignment, I couldn't help thinking, not only about Buddy, but our cadre of Maintenance Supervisors and Superintendents. I've known several of them well as I've bounced around Caltrans, and have been introduced to a lot more. These folks resemble nothing so much as sergeants and master sergeants in the U. S. Army. One of their unofficial duties, by the way, is to educate the fresh-faced novices that Headquarters sends out to supervise them every few years in the realities of keeping a road together.

Most of them are pretty gruff. You can read the years of hard work in punishing weather on most of their faces. Usually they don't look as if they've taken the Surgeon General's latest lifestyle advice very seriously. They eye a flatlander from Headquarters in Bruno Magli loafers with some humor and not a little suspicion. They're knowledgeable about their roads and their territories, but they're something more. They're savvy. You want to get something done, go talk to a Maintenance Supe. They know the system, and better, they know what part of it works and what doesn't. And they have a knack of using the part that works and going around what doesn't. And if they have to, they'll take up a shovel and work right along with their troops.

Many of them are bona fide heroes, actually having risked their lives to save those of motorists or their fellow workers. They're in a constant battle with Mother Nature and with forces that seek to take their roads apart, and for the most part they win. And when something really big comes along, like that mess in Walker Canyon a few years back, they take it personally and don't rest until matters are made right again.

The folks in District 9 like to call Buddy Bayer "The Buddha." I confess I kind of like that. A name like that speaks of wisdom, compassion, enlightenment and humor. Not bad qualities for a supervisor anyplace in Caltrans.

We thank Buddy for his many years of service and wish him well in retirement.

And we thank our maintenance supervisors and those who work for them for a job well done, often under arduous circumstances.

Maria Contreras-Sweet
Secretary of the Business,
Transportation and Housing Agency

Gray Davis
Governor of California

Jeff Morales
Director of the California
Department of Transportation (Caltrans)